

CLAIMS

1. A plating structure comprising a plating film, in which fine carbon fibers or derivatives thereof are incorporated.
2. The plating structure according to claim 1, wherein said plating film is made of a single metal.
3. The plating structure according to claim 1, wherein said plating film is made of a metal alloy.
4. The plating structure according to one of claims 1-3, wherein a resin material is incorporated.
5. The plating structure according to one of claims 1-4, wherein said plating film is formed by electrolytic plating.
6. The plating structure according to one of claims 1-4, wherein said plating film is formed by electroless plating.
7. The plating structure according to one of claims 1-6, wherein ends of the fine carbon fibers project from a surface of said plating film.
8. The plating structure according to one of claims 1-6, wherein the derivatives are fluorinated carbon fibers.
9. An electronic part comprising cable patterns having said plating structure according to one of claims 1-6.

10. A mechanical part having said plating structure according to one of claims 1-6.
11. A multilayer body comprising: some plated layers having said plating structures according to one of claims 1-6; and other plated layers being plated with a different metal.
12. A heat radiator comprising: a plurality of plated layers having said plating structures according to one of claims 1-6; and a plurality of plated layers being plated with a different metal, wherein two types of said plated layers are alternately layered, and edges of said plated layers plated with the different metal are removed by etching whereby a plurality of said plated layers having said plating structures are arranged parallel with separations.
13. A method of producing a plating structure comprising the steps of: adding a dispersing agent and fine carbon fibers or derivatives thereof into a plating solution so as to disperse the fine carbon fibers or the derivatives in the plating solution; and plating a substrate in the plating solution so as to form a plating film, in which the fine carbon fibers or the derivatives are incorporated, on a surface of the substrate.
14. The method according to claim 13, wherein resin materials are further dispersed in the plating solution so as to form a plating film, in which the resin materials and the fine carbon fibers or the derivatives are incorporated, on the surface of the substrate.
15. The method according to claim 13 or 14, wherein a cationic and/or nonionic surfactant is used as the dispersing agent.

16. The method according to claim 13 or 14, wherein the dispersing agent is polycarboxylic acid, e.g., polyacrylic acid, or salt thereof.
17. A plating solution including a dispersing agent, which is polycarboxylic acid, e.g., polyacrylic acid, or salt thereof, so as to disperse fine carbon fibers therein.